15: Osborn & Smalley 1.-5 (1948) 1965 NO6 Comanche NO6
Oklahoma

International Journal of American Linguistics

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VOLUME 15

Published at the Waverly Press, Inc.
by Indiana University
under the auspices of
Linguistic Society of America
American Anthropological Association
with the cooperation of
Joint Committee on American Native Languages

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New York
1965

[title page]

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Oklahoma

FORMULAE FOR COMANCHE STEM AND WORD FORMATION

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0. Introduction
1. Affix check list
2. Stem formation
3. Stem classes
4. Word formation

0. In this paper we discuss Comanche stem and word formation. The formulae utilized to represent the observed constructions grew out of an attempt to handle the cross-cleavage between stem classes and word classes. Although not all possible combinations of formational and inflectional elements have been found, this method of statement by formulae can be expanded to include any new combinations recorded.

Stem classes are characterized by their potential distribution with alternants of suffix 311, but are not identifiable by any feature of internal structure. Word classes are characterized by their potential syntactic distribution, and when inflected are identified morphologically by their final suffix (see 4).

1. Affix check list.[2] The following list is representative of the most commonly used

[1] Data for this paper were gathered in the 1948 session of the Summer Institute of Linguistics at the University of Oklahoma. Comanche informants from Walters, Oklahoma, were Molly Weryavah, Helen Seahmer, and Emily Riddles. We are indebted to the staff of the Institute, particularly to Elliott Canonge and John B. McIntosh for technical information on Comanche, and to William L. Wonderly for advice in the presentation of the material.

[2] The phonemes of Comanche are analyzed as follows: p, t, k, k^{w}, ʔ; c; s, š, h; m, n, r; w, y; i, I, e, E; ɨ, Ɨ, a, A; u, U, o, O. Large caps represent voiceless vowels; small cap B represents bilabial v. Stress /ˊ/ is written immediately preceding the stressed syllable. Hyphen (-) represents morpho-

193
128 affixes in Comanche. Some classes of affixes are not exhaustive (e.g. derivational affixes, class 100, which includes many more morphemes), but the pertinent classes for stem and word formation are represented.

Classification of affixes by centuries is as follows: 100 derivational, 200 verbal inflectional, 300 nominal inflectional. Classification by decades is generally on the basis of relative order. However, morphemes 201, 253, 254, 323 have been classified otherwise for convenience of description since their relative order is not as pertinent as their identity with the group in which they are placed. Decimal numbers indicate mor-

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[28] logical juncture where clitic stems are bound to other stems or words (see 3.1.3., 3.1.4., 3.3.).

The recurrent morphophonemic changes are as follows: (1) Single morpheme-final vowels generally become voiceless in utterance-final position. 'kahrinIĪ *houses* > 'kahnI *house*.

(2) In certain combinations morpheme-final vowels reduce to open transition of neutral vowel quality. In certain combinations morphemes reduce medially by the loss of one or more morae. Compare 'tĪhka *eat* in the following: 'tĪhkaru?i-nI? *I will eat*, 'tĪknĪnitu?i-nI? *I will always be eating* (['tĪk^{h}nĪnitu?i-nI?] in which [k^{h}] is approximately [kI] but without vowel mora); 'puukU *horse* + 'kahnI *house* > 'pukuknI ['pukuk^{h}NI] *barn*.

(3) t interchanges with r; and p interchanges with n, utterance medially at morpheme boundaries under conditions not always phonologically determined. 'pani? *older brother*, nI-'nani? *my older brother*; 'tĪnoorI-ma? *he is writing*, 'caa-nI? 'rĪnoorĪ *I write well*. After pause the p and t always occur: 'tenahpI?a 'rĪnik^{w}Īri-nI? 'nuni? *I see the man singing*, but 'tenahpI?a / 'tĪnik^{w}Īri-nI? / 'puni? (in which / indicates tentative pause). t (but not p) always occurs after i. '?itI *this one* < ?i 3rd person close + -tI nominalizer; '?orI *that one* < ?o 3rd person distant + -tI; 'pinapĪrĪĪ *large ones* <'piapI *big*.

(4) ? + ? = ?. 'narii? *dog* + -?a genitive > 'narii?a *dog's*.

[p. 93-B]

193 128 **pheme alternants.** Distribution classes of **stems and affixes** are defined below.

Reference to affix classes is made in even century and/or decade numbers (e.g. reference to tense is made by 260). Reference to specific morphemes is made by the list number (e.g. reference to -tu?i future, is made by 261). The distribution of alternants in respect to each other is indicated in the list.

193 Class 100: 110, 120 1st and 2nd order derivational prefixes respectively; 130 derivational suffixes.

111. ca?-[3] *with an upward movement of the hand*
112. ma?- *pertaining to the hand*
113. ro?- *with a violent movement of the hand*
114. co?- *with the head*
115. ki?- *with the elbow*
116. hu?- *with the back*
117. ta?- *with the leg or foot*
118. ki?- *with the mouth or scissors*
119. ci?- *with something sharp*

121. na- reflexive

131. -pɪ̄ nominalizer
132. -? nominalizer
133. -pI[4] classificatory affix
134. -pī? classificatory affix
135. -BI classificatory affix
136. -ci? classificatory affix

Class 200: 201 infix; 210–250 verbal suffixes in relative order by decades.

201. -*V*-[5] imperative → (distribution restricted to an arbitrary class)

[3] Morphemic alternation of affixes in class 110 is not completely analyzed. Each affix in this class has an alternant with final h instead of final ?.

[4] Classificatory affixes here listed do not make any determinable difference to the root. That they are derivational affixes, however, is shown by the fact that t[illegible] are generally lost from R in the formula R + S = S.

[104] [5] *V* is used here and in morpheme 321.1 as a morphophonemic symbol for a lengthening of a single vowel to two morae.

[p.94-A]

193

211.	-kĭ	benefactive
221.	-ma	completive
222.	-ʔe	habitual
231.	-kʷa	motion away
241.	-yu	verbalizer
251.1	-tuʔi	future → (in positive statements)
251.2	-waʔi	future → (in negative statements)
252.	-ʔi	past
253.	-yU	past (?)
254.	-nU	past (?)

Class 300: 310–330 nominal suffixes in relative orders by decades.

311.1	-tī	nominalizer, pre-plural → (with S^a except as described for 311.2; and after all verbal inflection except 251.1)
311.2	-∅	nominalizer, pre-plural → (with S^{pr} 1st and 2nd persons)
311.3	-nī	nominalizer, pre-plural → (with S^a, and after 251.1; never occurs except with 321 or 322)
312.1	-ʔ	subjectivizer → (with S^{pr} 1st and 3rd persons singular)
312.2	-nĭ	subjectivizer → (with S^{pr} 2nd singular)
313.	-ʔa	genitive
314.	-hka	(meaning undetermined)
321.1	-*V*	plural → (occurs except as defined in alternants below)
321.2	-mī	plural → (with S^{pr} nī 1st person exclusive, in proclitic position, and fluctuates with 321.1 after ta 1st person inclusive and mī alternant of 2nd person)
321.3	-nĭ	plural → (with S^{pr} 1st and 2nd persons in plural free forms and 1st person exclusive in enclitic position)

[p. 94-B]

193

322.1	-k^{w}I	dual → (fluctuates freely with 322.2 except as defined in alternants below)
322.2	-h	dual → (occurs in objective forms (plus 331); otherwise fluctuates freely with 322.1 except as in 322.3)
322.3	-hĭ	dual → (occurs on proclitic S^{pr})
323.	C_1V_1-	non-singular (for alternants and patterns of reduplication see 3.1.1.).
331.1	-ha	objective → (generally with singular S^{a} ending in 131 or 132; reduction occurs: -ʔ + -ha > -ʔa)
331.2	-hta	objective → (with a group of S^{a} ending in a bilabial consonant + I)
331.3	-i	objective → (with a group of S^{a} ending in -tO and -cO without assimilation and reduction; occurs with S^{a} other than all above, and after 311, 321, or 322, with assimilation and reduction)[4]

2. Stem formation. Comanche stems are derived according to the formulae below. Patterns of stem formation do not coincide with stem classes. In these formulae a root (R) is a morpheme, free or bound, to which

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[4] Final back vowels become voiced front vowels on the same level. The resulting vowel cluster is reduced by loss of the second member. 'yuhhu *grease* > *'yuhhiĭ > 'yuhhi *grease* (object); 'wihtua *bucket* > *'wihtuei > 'wihtue *bucket* (object). When following 311 and 321 or 322, the assimilation applies to both morphemes. 'sonipɪ̈nɪ̈ *grass* (plural) > *'sonipɪ̈nɪ̈ĭ > 'sonipɪ̈nii *grass* (plural object); 'huniyanĭh *songs* (dual) > *'huniyanĭhi > 'huniyanihi *songs* (dual object).

Examples of alternants 331.1 and 331.2: 'waʔooʔ *cat* > 'waʔooʔa *cat* (object); 'pihĭsikĭi *peach* > 'pihĭsikĭiha *peach* (object); 'tosahwI *silver* > 'tosahwihta *silver* (object); 'tosiitO *hoof* > 'tosiitoi *hoof* (object).

A stem which does not fit the pattern: 'yihnĭ *porcupine* > 'yihne *porcupine* (object).

[p.95-A]

193 derivational affixes may be attached, or with
104 which other roots may be compounded. R_1 is a free root. A stem (S) is a root, with or without derivational affixes, to which inflectional affixes may be attached, or which functions as an uninflected particle.

193 Stems contain only one stress, generally on
194 the first syllable, or none at all in the case of clitic stems. Examples: 'puhihwI *money*, 'to?I *pipe*, 'tīrī?ai *work*, wa'sape *bear*, nī-'ʁia? *my mother*.

193 Formulae for stem formation cover observed formations, but do not imply that any root may occur in all possible formational combinations.

R_1 = S. 'pui? *eye*, 'wa?oo? *cat*, '?ara? *cross uncle*, 'tĭhka *eat*, 'mi?a *go*, 'hna *yes*.

110 + R = S. 'tahpaana *sole of foot* < 117 + -paana *palm*; tahto'koo *big toe* < 117 + -to'koo *first digit*; mahto'koo *thumb* < 112 + -to'koo *first digit*; tah'tua *little toe*; 'co?nika? *hat* < 114 + -nika? *push into*; 'soko-kī ma-'ci?nikatī-nī? *I am sticking it into the ground* < 119 + -nika? *push into*; ma'cihorarī-nī? *I am digging it (with a stick or spade)* < 111 + hora *dig*; ?u-'hu?kʷĬri-?a?i-nī? *I spilled it with my back* < 116 + kʷĬri?a *spill*.

120 + R ± 130 = S. 'naʁoopĬ *picture* < 121 + 'poo *draw* + 131; 'narihka *groceries* < 121 + 'tĭhka *eat*.

120 + (110 + R)' = S. 'narohtĭkʷa?i-?inĬ *you hit yourself (with hand)* < 121 + (113 + tĭkʷa *hit*).

R + 130 = S. 'tĭhka? *table* < 'tĭhka *eat* + 132; 'piapĬ *big* < 'pia- *big* + 131; 'tĭhkapĬ *meat*; 'poopĬ *drawing* < 'poo *draw* + 131; 'huupĬ *tree* < 'huu- *wood, log, tree* + 133; 'paapI *head* < 'paa- *head* + 133; 'tenahpī? *man* < 'tenah- *man* + 134.

R + S = S (in which the S preceding the equation sign may be any stem including the resultant of this formula; however, the maxi-

[7] Immediate constituents are divided in this way because *120 + 110 (without R) never occurs. 110 + R = S above, but S cannot be substituted for 110 + R here because S resulting from other formulae do not occur with 120.

193 mum observed number of roots in any combination is four: 'piarosawoвikni *big white house* < 'pia- *big* + 'tosa- *white* + 'woвi *wooden* + 'kahni *house*). Examples: 'pukuknI *barn* < 'puuku *horse* + 'kahni *house*; '?esiwanah *gray blanket* < '?esi- *gray* + 'wanah *blanket*; 'tĭkʷikʷitu?i-?urĭkʷĬ *they* (dual, distant) *will sit down to eat* < 'tĭhka *eat* + yĭkʷi *sit down* (non-singular); 'tĭrĭehpĭ?rĭi-ca? ma-'вiacahora?I *the children dug out a deep hole* (*with hand*) < 'pia- *big* + 111 + -hora *dig*; 'puica?nika? *eye glasses* < 'pui? *eye* + 111 + -nika? *push into*; 'koвenaвoopĬ *portrait* < 'kooвE *face* + 121 + 'poo *draw* + 131; nĭ-'вia?-ca? 'pianacahki?a?I *my mother scratched herself deeply* (*with something sharp*) < 'pia- *big* + 121 + 111 + -ki?a *scratch*; 'nĭmĭkʷa?ihpĭ? *Indian woman* < 'nĭmI *Indian* + 'kʷa?ih- *woman* + 134; '?eso?ekaвItĬ *pink* < '?eso *not quite ripe* + '?eka- *red* + 135.

193 128 3. Stem classes. The above stems are divided into distributional classes S^a, S^b, S^p, on the basis of potential occurrence with alternants of 311. Stems as such are not equated with words.

193 3.1. S^a may take alternants 311.1 or 311.2, with the formal sub-classes S^q, S^v, S^o, S^{pr}:

3.1.1. S^q (qualitative stems) take 323. They are inflected for future according to the formula S^q + 241 + 251. '?eвIвI *blue* + 311.1 > '?eвIвItĬ *blue, blue one*; '?eвIвI *blue* + 241 + 251 > '?eвIвIyutu?i-marĭi *they will be blue* (-marĭi 3rd person plural close).

The initial syllable of stems beginning $C_1V_1C_2$- reduplicates with 323 in two patterns: $C_1V_1C_1V_1C_2$- and $C_1V_1hC_1V_1C_2$-. 'huyunihtĬ *cylindrical* > 'huhuyunihtĭkʷĬ *cylindrical ones* (dual); 'tĭtaatĭ *little one* > 'tĭhtĭtaatĭkʷĬ *little ones* (dual).

Some S^q show morphophonemic reduction when occurring with 323, with some initial $C_1V_1C_2$- becoming stem-initial -C_1C_2- when occurring with 323 (see fn. 2). 323 +

[p. 96-A]

193 'pohotatĪ *thick, thick one* + 321 > 'pophotatīī *thick ones* (plural).

Some non-S[a] which contain as the initial morpheme a root which generally forms an S[a] may take 323 in the same manner. ʔī-'totsaʙimoroo?nīī-ca? 'koiʔnīī *your white cows died* < 'tosaʙimoroo? *white cow*; ʔī-'pĭʙiarosaʙimoroo?nīī-ca? 'koiʔnīī *your big white cows died* < 'piarosaʙimoroo? *big white cow.*

3.1.2. S[v] (verb stems) do not take 323. They are inflected for future tense according to the formula S[v] + 251. 'miʔa *go* + 311.1 > 'miʔarī-tah *we* (dual inclusive); *are going, we are the ones going* (-tah 1st person dual inclusive); 'miʔa *go* + 251 > 'miʔaruʔi-tah *we* (dual inclusive) *will go.*

3.1.3. S[e] (phonologically bound enclitic stems) may take 200 and/or 300 (but not 323). These stems are considered clitics in that (1) they are phonologically bound to words[5] being normally unstressed and not uttered in isolation; (2) they occur after any inflection on the stem, although they may themselves be inflected. 'kahninīī-kĭyutuʔ-inīī *the ones who will be in the houses* < ('kahni *house* + 311) + (-kĬ + 241 + 251 + 311). 'tenanīī-maʔaiyutuʔinīī *the ones who will be with the men* < ('tènah- *man* + 311) + (-maʔai *with* + 241 + 251 + 311). Immediate constituents are divided on the analogy of 'nī-maʔaiyutuʔi-ʔurīk[w]Ĭ *they* (dual) *will be with me.* nī 1st person exclusive (see **3.1.4**) does not take 200 inflection.

3.1.4. S[pr] (pronoun stems) may take no other inflection than 300 (but not 323). In clitic form they are unstressed.

Non-demonstrative S[pr] (1st and 2nd persons): nī 1st person exclusive, ta 1st person inclusive, ʔī-mī 2nd person (ʔī is never inflected with 311; mī is always inflected with 311). nī-ʙiaʔ *my mother*, ʔī-'poʔoroʔ *your* (sg.) *pig*, mīhī-'sariiʔ *your* (dual) *dog.*

[5] For the formation and definition of words, see 4.

[p. 96-B]

193 Demonstrative S^{pr} (3rd person): ma 3rd person close, si and ʔi[9] 3rd person close, so and ʔo 3rd person distant, su and ʔu 3rd person distant or out of sight. 'pae ma-'ʔuhtu *give him* (close) *the water*, 'sitĭ-ha ʔu-'ʙuniʔ *did he* (close) *see him* (distant)?

S^{pr} with specialized meanings: pï 3rd person identical with subject, ʙï 2nd person predual imperative. These have also a specialized distribution. pï appears only in proclitic position as possessor of nouns and verbal nouns. pï-'sariiʔ *his own dog*, pï-'kahni-kĭ-ʔuʔ *he is in his own house.* ʙï always appears in enclitic position inflected with 322. 'kʷaʙi-ʙïkʷĭ *lie down* (dual)*!*, 'keta-ʙïkʷĭ 'ʔïhkoitïkʷĭ *don't go to sleep* (dual)*!*, nï-'ramiʔa-ʙïkʷĭ 'ʙuuniʔ *look at my brother* (dual)*!* < nï- 1st person exclusive + 'tamiʔ *younger brother* + 331 + -ʙï 2nd person imperative + 311 + 322, 'puniʔ *see* + 201.

ma, ʔo, ʔu and all non-demonstrative S^{pr} may be proclitic or last order enclitic. Proclitic position indicates possession of a noun or object (with objective inflection in the non-singular) of a verb or verbal noun.[10] nï-'ʙiaʔ-caʔ nï-'suwaitĭ *my mother wants me, my mother is the one wanting me* < nï 1st person exclusive + 'piaʔ *mother* + -caʔ stative particle (S^p), nï 1st person exclusive (object) + 'suwai- *want* + 311.

Enclitic position (with 312 in the singular) indicates subject of a noun, a verb, or a verbal noun. ʔï-'pia-ʔuʔ *she* (distant) *is your mother*, mïhï-'tohpaʔi-marïkʷĭ *they* (dual, distant) *hit you* (*dual*) (mï + 311 + 322 + 331; ma + 311 + 322); 'yaketï-ʔïnĭ *you are crying.* If any word precedes the verb in the sentence, the pronoun subject is generally enclitic to that word. 'picipĭha-ʔoriï 'hiʙitïï *they* (distant) *are drinking the milk, they are the ones drinking the milk.*

Non-demonstrative S^{pr} may be free forms when inflected with 321.3 or 322.1. They

[9] Meaning distinction between ʔ- and s- undetermined.

[10] For the formation and definition of words, see 4.

[p.97-A]

193 carry stress in this form (see 4). 'nīnɪ̄ *we* (plural exclusive), 'mīkᵘɪ̄ *you* (dual).

Demonstrative S^{pr} may be free forms (with stress) when inflected with 311.1 or 314. (ma has never been found inflected with 314.) '?itī *this one*, 'surīī *those* (out of sight), '?ohka *that one* (distant).

Demonstrative and non-demonstrative S^{pr} may cluster with other clitics (S^{pr}, S^c, S^p) to constitute a free form with one stress. 'sukīrɪ̄-?u? *it is over there* < su 3rd person distant + -kɪ̄ *in, at* (S^c) + 211 + -?u 3rd person distant + 312; 'nī-?u?, *it is I*.

3.2. S^n (noun stems) may take alternant 311.3.[11] 'peekᵘinīī *fish* (plural) < 'peekᵘi *fish* + 311.3 + 321; tahto'koonīkᵘɪ̄ *big toes* (dual); 'tɪ̄boopɪ̄nīī *paper* (plural); 'pɪ̄narosawoʙɪ̄kninīī *big white houses* (plural).

One group of S^n does not take 323 in the non-singular. 'pui?nīkᵘɪ̄ *eyes* (dual); 'kwasu?unīī *shirts* (plural).

Two groups of S^n take 323 in the non-singular: (1) stems which contain as the initial component a root which generally forms an S^q (see 3.1); (2) a class of simple stems. 'yuyuupɪ̄nīī 'tenanīī *fat men* < 'yuupɪ̄ *fat*; '?i?irī?nīī *good natured ones* < '?irī? *good natured*; 'mumucipɪ̄nīkᵘɪ̄ *sharp ones* (dual) < 'mucipɪ̄ *sharp*.

3.3. S^p (particle stems) never take inflection. They are of two types, free and bound, e.g:

Free: 'kee *no*, 'haa *yes*, 'nah *just*.

Bound: -ca? stative particle (generally used in declarative sentences), nī-ʙaci?-ca? ?i-'paʙi?-ʙetɪ̄ *my older sister is the size of your older brother*; -se? narrative particle (gener-

[11] In one loan-translation, '?ohaʙɪtɪ *orange* (a fruit), '?ohaʙɪtɪ́nɪ́ *oranges*, both -tɪ and -nɪ (alternants of 311) occur in sequence in the non-singular. Apparently the S^q '?ohaʙɪ *orange* (color) and -tɪ with which it generally occurs as a noun, form an S^n in this case. S^q take 323 in the non-singular while the S^n '?ohaʙɪtɪ́, now the name of a specific object, does not. In one informant's speech the transformation has been made more complete: '?ohaʙɪtɪ́? *orange* (with 132 nominaliser).

[p. 97-B]

193 ally used in tales), 'surĭ-kĭ-se' 'wihnu 'rĭya-ainU *he then died*; -ha interrogative particle, 'surĭ-ha pin'haa?a 'caa 'kĭsuka *does he like sugar?*

4. Word formation. Stems and affixes may be combined into words according to formulae presented below. Words generally contain only one major stress. A second stress may occur late in a long word. 'tĭkkahni-'ku-ma? 'mi?arĭ *he is going to the dining hall.* Words of each class are mutually substitutable in the syntactic positions defined for each class. Inflected words are partially identifiable by the class of the final affix with which they occur. If the final affix is of class 300 the word is a noun (N) or verbal noun (VN). If the final affix is one of class 200 the word is a verb (V). Words which consist of uninflectable S^p are particles (P).

193 104

193 Although clitic S^p and S^{pr} enter into word formation they are not included in formulae for word classes. S^p and proclitic S^{pr} do not change the class of the word in which they are bound and are therefore non-pertinent to the formulae. Enclitic S^{pr}, always subject, are not generally in the same immediate constituent with the word in which they are bound. It is syntactically convenient to define word classes without the limitations which enclitic S^{pr} place on them. 'po?ro?a-ma? 'ruhiBIti 'suwaitĭ *he wants the black pig* [N (object) -S^{pr} (subject), N (object), VN]; 'kanaBihci?-ma? *he is slender* [N-S^{pr} (subject)].

4.1. Verbs (V) may take subject or object; they may not be subject or object.

$S^v \pm 200 = V$. nĭ-'rĭi-ca? 'narĭmĭ-kU 'kahnimi?a?I *my friend went visiting in town* < S^{pr} + S^a ('rĭi *friend*) + S^p = N (subject), S^a ('narĭmĭ *town*) + S^o (-kU *in*) = N (object), S^v ('kahnimi?a *go visiting*) + 252 = V; 'mahitenahpĭ?-ca? pĭ-'pake Bĭ-'nahu-ma 'wĭsaka?I *the warrior split his arrow with his knife* < S^a ('mahitenahpĭ? *warrior*) + S^p = N (subject), S^{pr} + S^a ('pake *arrow*) + 331 =

193 N (object), S^{pr} + S^a ('nahu *knife*) + S^s (-ma *with*) = N (object), S^v ('wisaka *split*) + 252 = V.

S^a + 200 = V. 'sisiipe?yutu?i-marii *they will be even (level)* < 323 + S^a ('siipe? *even*) + 241 + 251 = V, + S^{pr} + 311 + 321 (subject). 'pipriyutu?i-marii *they will be heavy* < 323 + S^a ('piri *heavy*) + 241 + 251 = V, + S^{pr} + 311 + 321 (subject).

N + S^s + 200 = V (in which N is the resultant of any formula in **4.2**). 'tihtitaatica? 'wobiawonii-kiyutu?i *the little ones will be in the boxes* < 323 + S^a ('titaa *little*) + 311 + S^p = N (subject), [S^a ('wobiawo *box*) + 311 + 321 = N] + S^s (-ki *in*) + 241 + 251 = V. 'marii-kiyutu?i-ma? *it will be in them* < ['S^{pr} + 311 + 321 = N] + S^s + 241 + 251 = V, + S^{pr} + 312 (subject). ka'huu-ca? 'cena-kuhpayutu?i *the rat will be inside the fox* < S^a (ka'huu *rat*) + S^p = N (subject), S^a ('cena *fox*) + S^s (-kuhpa *inside*) + 241 + 251 = V.

4.2. Nouns (N) may be subject or object; they may take a subject but may not take an object inflected with 331.

N_1 is substitutable in the last formula of this section; N_2 is not. Otherwise both are referred to as N.

S^a ± 300 = N_1. ka'huunii-ca? 'kihtaabicipiha 'rihka?i *the rats ate the cheese* < S^a (ka'huu *rat*) + 311 + 321 + S^p = N (subject), S^a ('kihtaabicipi *cheese*) + 331 = N (object), S^v ('tihka *eat*) + 252 = V. '?arikaca? 'wacipi *the deer is wandering* < S^a ('?arika *deer*) + S^p = N (subject), S^a ('wacipi *wanderer*) = N.

S^a ± 300 = N_1. pimo'ro?raibonii-ca? 'keksuatii *the cowboys are near* < S^a (pimo'ro?raibo *cow-white man*) + 311 + 321 + S^p = N (subject), 323 + S^a ('kesua *near*) + 311 + 321 = N. 'pihtiti-ni? ma-'?uhtu?i *I gave him the heavy one* < S^a ('pihti *heavy*) + 311 + 331 = N (object), + S^{pr} + 312 (subject), S^{pr} + S^v ('?uhtu *give*) + 252 = V. '?ori '?esibiti 'rihka?-ruhka *that gray one is under the table* < S^{pr} + 311 = N (subject), S^a ('?esibi *gray*) + 311 = N (subject),

[p. 98-B]

193 [S^a ('tĭhka? *table*) = N] + S^e (-ruhka *under*) = N.

'S^{pr12} + 300 = N_1. 'surĭ-?u? *it* (distant) *is he* (distant) < 'S^{pr} + 311 = N, + S^{pr} + 312 (subject). 'sitĭ-ca? 'rĭtaati 'woвiknиa?I *he* (close) *has a little wooden house* < 'S^{pr} + 311 + S^p = N (subject), S^q ('tĭtaa *little*) + 311 + 331 = N (object), S^v ('woвiknиa?i *have a wooden house*) = V. pimo'roo-ca? '?urii 'makUye?I *the cow chased them* (plural) < S^a (pimo'roo *cow*) + S^p = N (subject), S^{pr} + 311 + 321 + 331 = N (object), S^v ('makUye *chase*) + 252 = V.

V + 300 = N_2 (with limitation noted in 4.3). '?ekaвIyutu?inĭĭ-?urĭĭ *they will be red ones* < [S^a ('?ekaвI *red*) + 241 + 251 = V] + 311 + 321 = N, + S^{pr} + 311 + 321 (subject).

N_1 + S^e ± 300 = N_2. '?ok^{w}etĭĭ-kIrĭ-?urĭĭ *they are in the river* < [S^v ('?ok^{w}e *flow*) + 311 + 321 = N] + S^c (-kI *in*) + 311 = N, + S^{pr} + 311 + 321 (subject). '?e?ekaвItĭĭ-ca? '?e?eвIвItĭĭ-'kĭma? *the red ones are beside the blue ones* < 323 + S^a ('?ekaвI *red*) + 321 + S^p = N (subject), [323 + S^a ('?eвIвI *blue*) + 311 + 321 = N] + S^e (-kĭma? *beside*) = N. 'tĭhtĭtaatĭ-ca? 'woвiawo-kUpatI *the little ones are in the box* < 323 + S^a ('tĭtaa *little*) + 311 + S^p = N (subject), [S^a ('woвiawo *wooden box*) = N] + S^e (-kUpa *in*) + 311 = N. 'paapasi-nĭ? 'sahuвa-ma?ai-ku 'mahiaru?I *I mixed the potato in with the stew* < S^a ('paapasI *potato*) + 331 = N (object), + S^{pr} + 312 (subject), [S^a ('sahuвa *stew*) = N] + S^e (-ma?ai *with*) + S^e (-kU *in*) = N (object), S^v ('mahia *mix*) + 251 = V. 'tĭpinĭĭ-hoikIt-Ica? '?ekaвItI *the thing around the stones was red* < [S^a ('tĭpi *stone*) + 311 + 321 = N] + S^e (-hoikI *around*) + 311 + S^p = N (subject), S^a ('?ekaвI *red*) + 311 = N.

[12] Any formation with S^{pr} unstressed is a clitic within a larger word unit (see 4).

[p.99-A]

193 **4.3.** Verbal nouns (VN) may be subject or object; they may take subject and object.

$S^v \pm 200 + 300 = VN$ (note that VN = N formationally, in V + 300 = N above, but distributionally it is distinguished by the fact that it may take an object inflected with 331). 'tĩhoitĩ-ca? '?arĩka?a ?a'ʁehka?I *the hunter shot the deer* < S^v ('tĩhoi *hunt*) + 311 + S^p = VN (subject), S^a ('?arĩka *deer*) + 331 = N (object), S^v (?a'ʁehka *shoot*) + 252 = V. 'kohtoorĩ-?urĩh *they* (dual) *are building the fire* < S^v ('kohtoo *build a fire*) + 311 = VN, + S^{pr} + 311 + 322 (subject). 'surĩ pĩ-'tĩetuka?a 'muruka?etĨ 'haʁĩ?eeyU *he, blowing out his little lamp, was asleep* < 'S^{pr} + 311 = N (subject), S^{pr} + S^a ('tĩetuka? *little lamp*) + 331 = N (object), S^v ('muruka *blow out*) + 222 + 311 = VN (subject), S^v ('hani *sleep*) + 222 + 253 = V. hu'cu?anĩ? 'yaketi 'naka?I *I heard the bird singing* < S^a (hu'cu? *bird*) + 331 = N (object), + S^{pr} + 312 (subject), S^v ('yake *sing*) + 311 + 331 = VN (object), S^v ('naka *hear*) + 252 = V. ka'huu-ca? 'haniʁihta 'kuu?etĩ 'rĩyai *the rat that used to store away the corn is dead* < S^a (ka'huu *rat*) + S^p = N (subject), S^a ('haniʁI *corn*) + 331 = N (object), S^v ('kuu *store away*) + 222 + 311 = VN (subject), S^v ('tĩyai *is dead*) = V. 'tĩhka?eeru?inĩĩ *ones who will be eating continually* < S^v ('tĩhka *eat*) + 222 + 251 + 311 + 321 = VN.

4.4. Particles (P) may not be subjects or objects, nor may they take subjects or objects. Only those particles which carry their own stress may stand as words.

S^p = P. 'haa 'cihaʁĩyaihumi?arĩ-nĩ? *yes, I am hungry* < S^p ('haa *yes*) = P, S^v ('cihaʁĩyaihumi?a *go hungry*) + 311 = VN, + S^{pr} + 312 (subject). 'ke-nĩ? 'wananapĨha 'suwaitĨ *I do not want the sock* < S^p ('kee *no*) = P, + S^{pr} + 312 (subject), S^a ('wananapĨ *sock*) + 331 = N (object), S^v ('suwai *want*) + 311 = VN.

[p. 99-B]